

GUILDFORD
Rural Sanitary District.

pp 18-19.



Annual Health Report

FOR 1894.



BY

W. WELLINGTON LAKE,

Medical Officer of Health,

*Medical Officer to the Guildford, Godalming, and Woking
Joint Hospital Board.*

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ANNUAL HEALTH REPORT FOR 1894.

CONTENTS.

- I.—PARISHES, ACREAGE, INHABITED HOUSES, &c.
- II.—TOPOGRAPHY, GEOLOGY, WATER SUPPLY.
- III.—METEOROLOGY.
- IV.—VITAL STATISTICS.
- V.—SUMMARY OF SICKNESS AND MORTALITY FROM THE SEVEN-PRINCIPAL ZYMIC DISEASES, AND FROM CERTAIN OTHER DISEASES, WHICH HAVE TO BE NOTIFIED UNDER THE INFECTIOUS DISEASES (NOTIFICATION) ACT, 1889.
- VI.—ACTION TAKEN FOR PREVENTING THE SPREAD OF INFECTIOUS DISEASE.
- VII.—GUILDFORD, GODALMING, AND WOKING JOINT HOSPITAL BOARD.
(1) Isolation Hospital (Fevers); (2) Hospital for Small Pox Patients.
- VIII.—SUMMARY OF OTHER PROCEEDINGS TAKEN DURING THE YEAR UNDER THE SANITARY ACTS, &c.
- IX.—SANITARY INSPECTOR'S REPORTS.
- X.—APPENDIX, CONTAINING STATISTICAL AND OTHER TABLES.

Prepared in accordance with Section 14 of the Order of the Local Government Board, dated 23rd March, 1891, regulating the duties of Medical Officers of Health.

GUILDFORD RURAL SANITARY DISTRICT.

Annual Health Report, 1894.

The Chairman and Members of the Guildford Rural District Council.

LADIES AND GENTLEMEN,

I have the honour to present you with my first Annual Health Report. The Health Report for 1893 was a joint report drawn up by my predecessor and myself, Dr. Jacob having been Medical Officer of Health for the first six months of that year, whilst I was in office the latter half of the year.

I. Parishes, Acreage, Inhabited Houses, &c.

At the census of 1891 the Guildford Rural Sanitary District comprised sixteen entire Parishes and part of three Parishes grouped into five Registration Sub-Districts. The area was 65,046 statute acres. The number of inhabited houses was 6,269. (Population, *vide* Vital Statistics, Section IV. of this Report.)

In consequence of the absorption at the end of 1891 of nearly the whole of the contributory places of Farncombe, Charterhouse, and Crownpits (which are in the Godalming Sub-District) into the extended Borough of Godalming; and the constitution at the end of 1893 of the whole Parish of Woking as an Urban District, the total acreage of the Guildford Rural District became reduced to 56,578 statute acres, and the inhabited houses were thus reduced to 4,683.

The total Rateable Value is now £129,287.

A ridge of chalk extends from the Hog's Back through Merrow and Clandon Downs, with thin gravelly tracts here and there from Albury Downs to Netley Health.

A belt of sandy and clayey ground (Reading beds) occurs North of the chalk ridge, extending from St. Bartholomew's by Merrow to East Horsley.

The area to the North comprises a broad tract of stiff clay (London clay) as at Wood Street and onwards by West Clandon to Ockham. Thin gravelly patches occur here and there in the Wey Valley and at Wood Street, West Clandon and Duncombe Farm.

Beyond is an extensive tract mainly of sands with some loamy layers (Bagshot beds) and with coverings of gravel—on the whole a very mixed area: and with the exception of the loamy areas which support water (shallow pools, &c.) the region is essentially a porous one as around Pirbright, Woking, Ripley, and Wisley.

The vale at Pease Marsh East of Compton is clay (weald clay) with coverings of gravel: the same clay occurs over the Southern portions of the area, at Great Godalming Copse, and again at Smith Wood, South of Hurt Wood.

The rough Geology of the various Parishes of the District is as follows:—

Albury, about five miles S.E. of Guildford. The soil generally is lower greensand, with Atherfield clay at base; in the Northern portion of the Parish there are chalk and gravel. The Tillingbourne stream runs through the Parish.

Artington. The soil is generally gravel, with Atherfield clay in parts. The River Wey and the Tillingbourne stream run through the Parish.

East Clandon. Chalk most generally prevails, but in the Northern portion of the Parish, London clay is found.

West Clandon. Here also chalk is chiefly found, with clay in the Northern portion of the Parish; a strip of gravel runs up the Clandon Street. The Woking Water Works described later on in the Report are in this Parish.

Compton. The Parish of Compton, about two miles N.W. of Godalming, and four miles S.W. of Guildford, is chiefly on clay and chalk, with a band of Gault stretching from Binscombe across Compton Common.

Godalming (Rural). That portion of Godalming outside the Borough included in the Guildford Rural Authority's area, and abutting on the parishes of Compton, Puttenham, Milford, Witley, Hambledon, &c., is almost entirely on the lower Greensand.

East Horsley. Chalk generally prevails, with a band of Reading Beds running East and West through the Horsley Towers Estate, and a small patch of gravel at Duncombe Farm.

West Horsley. Whilst the soil of this parish is generally chalk and London clay, there is a band of Reading Beds running East and West, as well as a spot of the same Beds at Hook Wood.

The parish of *Merrow*, which joins the parishes of West Clandon, Albury, Stoke, &c., the soil is chalk and clay, with a belt of Reading Beds running East and West through the parish.

Ockham, which abuts on the parishes of East and West Horsley, and Ripley, the soil is for the most part London clay, with a patch of Lower Bagshot beds in the Park.

Pirbright, adjoining the parishes of Woking, Worplesdon, and Normandy ; the soil is generally Bagshot Beds, but on the North-west side of the parish there is a bed of Gravel.

Send and Ripley. In the Southern portion London clay chiefly exists, and gravel in the Northern portion, but in the neighbourhood of Sendholme, Bagshot sand predominates. The River Wey forms the Northern and Western boundary of the parish.

Stoke Rural. This Parish, which is bounded by the Borough of Guildford, Merrow, Artington, and Worplesdon—the soil is generally gravel, with spots here and there of London clay, whilst the Northern portion is over chalk. The River Wey runs through the parish.

At *Wanborough* we find chalk and London clay, with a belt of Reading Beds running from East to West.

At *Wisley* for the most part are found the Lower Bagshot Beds, though that portion of the parish round Wisley Farm is alluvium.

The large parish of *Worplesdon* is bounded by Woking, Normandy, Wanborough, Stoke, Merrow, Ripley, and Send. The soil generally consists of Lower Bagshot Beds and London clay. At Perry Hill and Oaklands the Middle Bagshot Beds are the principal strata. Burpham and Whitmoor Common are on gravel beds.

(Note for projected map see back.)

(3) THE WATER SUPPLY is chiefly derived from (a) Mains of the Woking Water Company (b) Village Works at Shere (c) Deep Wells, and (d) Shallow or Surface Wells.

(a) *The Woking Water Company.* The Company obtains its supply of water from a well sunk at a point on the Northern slope of the Albury downs, a little to the South of the main Road from Epsom, where the chalk is at the surface.

This well was sunk in 1883 to a depth of a little more than 100 feet from which shaft a large supply of Water has since been drawn.

This supply has been augmented by driving horizontal galleries in the chalk in a Westerly direction across the slope of the beds, and 30,000 to 40,000 gallons an hour can now be pumped from this Station.

In the exceptionally dry Summer of 1887, and subsequently, the Company found it advisable to augment its supply by sinking shafts and driving horizontal galleries from them in the chalk South of the village of West Horsley, where an additional Pumping Station has been erected, increasing the supply by upwards of 200,000 gallons per day, from a length of about 1,800 feet of horizontal galleries.

At a moderate computation, based on the assumption that eight inches of rainfall per annum can be made available over the Company's gathering ground, the average daily quantity of water eventually available for pumping will exceed 2,000,000 gallons per diem.

The Company's district stretches from the Fox Hills and Chobham Ridges on the West, to Pyrford, Ockham, and to beyond East Horsley on the East, and from the summit of the Hackhurst and Albury Downs on the South, to the Villages of Bisley and Horsell on the North.

The supply of water to this Company's district is at present adequate in quantity, and is of undoubtedly good quality, and there is every reasonable prospect of the supply being increased as the consumption increases in the district.

The water has been frequently analysed with most satisfactory results. It is well aerated and free from organic impurity, but it is rather charged with lime salts. One or two Institutions in the district have adopted measures for extracting a great proportion of these salts, so diminishing the hardness and rendering the water all the better adapted for washing and culinary purposes, as well as pre-

venting the furring of pipes and boilers, which I believe takes place with the water not thus treated. The process does not appreciably alter the taste, though it affects the aëration and beautiful lustre of the water.

(b) *Village Works at Shere.* REGINALD BRAY, Esq., Q.C., Recorder for Guildford, on his large and beautiful estate at Shere has sunk two wells, near the Tillingbourne, which are practically collecting tanks. The supply is derived from the hill springs. The water is of excellent quality and is pumped by water-power from the adjacent Tillingbourne into a reservoir of 100,000 gallons capacity, at a height of 275 feet above the Tillingbourne Stream or about 500 feet above sea-level. Thence with a system of $2\frac{1}{2}$ miles of 3-inch bore cast-iron mains, and $\frac{1}{2}$ a mile of 1-inch bore wrought-iron pipes, he supplies not only his own mansion and cottages, but many houses in the villages of Gomshall and Shere. The plant, however, is not sufficient to supply the whole of these villages.

(c) *Deep Wells* are not numerous in the district, but where they do exist pure water is generally found, though at Wood Street and Ockham, there has been great difficulty in obtaining good water—salts of lime and magnesium having been found in such quantities as to render the water unwholesome. On the other hand in the valley of the Tillingbourne at Gomshall, Shere and Albury, Artesian wells have been sunk at depths of about 75 feet into the Lower Greensand and Folkestone strata, for the extensive watercress cultivations in this neighbourhood, and I need scarcely say some of the purest water in England, and a constant supply can be easily obtained. It is somewhat surprising that a pipe supply of this excellent water has not been adopted as an enterprise for the whole of the Tillingbourne Valley. Messrs. GILLIGAN & SONS supply their Tannery Works at Gomshall and several neighbouring cottages from one of these Artesian wells.

(d) The *Shallow Wells* in the District are generally about 20 feet deep, and many much less than that. The water reaching these wells is consequently almost entirely surface water, and is, therefore, easily contaminated by leaky cesspits, etc., and I am of opinion that wherever the Water Company's mains exist, owners of old and new property should be urged to obtain this valuable water supply.

The history of all nations of which we possess any record proves that as they advanced in the scale of civilization they made greater efforts to supply their communities with an abundance of pure water. In each case it would appear that the cumulative experience of ages had taught the same lesson—that perfect health could not be attained without the use of considerable quantities of water, and that for many purposes it was imperatively necessary that the water should be hygienically pure.

III. Meteorology.

For the following summary as to the rainfall in Rural Surrey in 1894 I am much indebted to Admiral J. P. Maclear, R.N. of Cranleigh.

The rainfall of 1894 was, contrary to the general opinion, not exceptionally great in England, except in the South-Western Counties—Surrey, Sussex, Hants, and Dorset. In the Midland Counties the fall was even below the average. In Surrey, January and July were very wet months, the latter month being distinguished by two very heavy downpours—one of one-and-one-half inches on the 10th, and one of nearly two inches on the 29th. From the 19th October to the 17th November there were only two days without rain, and nearly ten inches fell, causing slight floods. The amount of rain registered at eleven stations in this district will be found interesting,

	Jan.	Feb.	Mar.	Apr.	May	Jun.	July	Aug.	Sep.	Oct.	Nov.	Dec.	Year
	in.	in.	in.	in.	in.	in.	in.	in.	in.	in.	in.	in.	in.
Cranleigh Common .	4.8	1.9	1.7	2.7	2.2	3.0	6.1	2.3	2.2	4.6	5.2	2.2	39.2
Cranleigh School ..	4.4	1.6	1.4	2.4	2.0	2.7	5.4	2.2	2.1	4.6	4.3	2.2	35.3
Willinghurst	4.4	1.3	1.6	2.6	1.8	2.4	5.0	2.0	2.0	5.1	5.0	2.2	35.5
Winterfold	4.2	1.9	1.5	2.4	1.8	2.7	5.6	2.6	2.2	5.1	5.8	2.2	38.3
Coneyhurst	4.9	2.2	1.7	2.5	2.1	2.7	5.7	2.8	2.2	4.8	5.4	2.2	39.4
Heathside.....	4.6	2.2	1.8	2.5	2.0	2.8	5.9	2.5	2.1	4.6	5.1	2.3	38.6
Malquoits	4.8	2.1	1.6	2.5	2.1	2.7	5.5	2.4	2.0	4.0	4.9	2.2	36.8
Hascombe	4.1	1.8	1.5	2.5	1.7	2.7	5.0	2.1	2.3	4.9	4.4	2.1	35.1
Hambledon	4.2	1.7	1.6	2.4	1.6	2.3	5.1	2.1	2.5	4.7	4.7	2.0	35.0
Dunsfold	4.6	1.1	1.2	2.2	1.8	2.2	4.0	1.2	1.8	4.9	5.8	1.5	30.3
Hall Place													34.8
													Mean 36.2

At Hall Place the rainfall for the year was the greatest since 1878.

IV. Vital Statistics.

1. The *Population* of the District in the middle of 1894 may be estimated at 20,560 persons, or less by 12,306 persons than it was at the census of 1891, in consequence of the absorption at the end of 1892 of nearly the whole of the contributory places of Crownpits, Farncombe and Charterhouse into the Borough of Godalming; and of the formation of the parish of Woking at the end of 1893 into a separate Urban District. The estimated population of each constituent registration Sub-District in the middle of the year is given in Table A at the end of this Report.

2. The number of *Births* registered in the District during the year was 470, which represents an *Annual Birth-rate* of 22.8 per 1000 of the population estimated as above, and is much below the average.

3. The number of *Deaths* registered in the District during the year (exclusive of those in Public Institutions) was 199. Adding 26 deaths in the Workhouse and Royal Surrey County Hospital of persons belonging to this District, and deducting 7 deaths in the Isolation Hospital of persons not belonging to this District, there remain 218 deaths, which represent an *Annual Death-rate* of 10.6 per 1000 of the estimated population, and is also much below the average. (See also Table A at the end of this Report.)

4. The number of Births, and the *corrected* number of Deaths, registered in the District during each of the last ten years, with the Annual Birth-rates and corrected Death-rates, were as follows :—

	1884.	1885.	1886.	1887.	1888.	1889.	1890.	1891.	1892.	1893.	1894.
No of Births—	907	969	1008	984	882	927	842	904	862	834	470
Birth-rate—	31.5	33.0	33.6	32.1	28.3	30.0	26.0	27.4	25.8	29.0	22.8
<hr/>											
No. of Deaths—	393	407	467	421	371	399	460	494	483	373	217
Death-rate—	13.6	13.8	15.6	13.8	11.6	12.5	14.2	15.0	14.4	13.1	10.6

5. The Deaths during the year from *Pulmonary Consumption* were 21 in number, and were at the rate of 1.0 per 1000 of the population. The deaths from *Bronchitis, Pleurisy, and Pneumonia* were 26 in number, and were at the rate of 1.2 per 1000 of the population, which is about the average rate in the District from these Diseases.

6. As to the *Age at Death*. The deaths during the year of *Infants under one year* were 33 in number, and were equal to 7 per cent. of the registered births, which is below the previous average rate of the District.

The deaths during the year of *persons aged sixty years and upwards* were 66 in number, and were about 30 per cent. of the deaths at all ages.

7. The *number* of Births and Deaths registered during the year, in each of the five Registration Sub-districts into which the constituent Parishes of the District are grouped is given in Table A at the end of this Report.

As to the above rates, Dr. BEALE COLLINS, in his Annual Health Report for Kingston-on-Thames, quoting from RANSOME on Vital Statistics, points out

that such death-rates as 12 and 10 per 1000 through a series of years are *impossible death-rates*. A death-rate of 10 per 1000 means that every person in the place must live to an average of 100 years, and of 12 per 1000 to an average of 83. Consequently, for every one dying under those ages it is necessary that some others must live to a correspondingly increased age, and that in the Guildford Rural District there would be very many people living, over 100 years of age, of which there is no evidence.

The low Birth and Death-rates in this District for 1894, as compared with other years, may be partly accounted for in that several of the more thickly populated parts of the District have become absorbed in the various Urban Districts referred to in the first paragraph of this section of the Report.

The corrected Birth-rates and Death-rates in each of these Sub-districts, for the last ten years, were as follows :—

SUB-DISTRICTS :—

RIPLEY—

	1884.	1885.	1886.	1887.	1888.	1889.	1890.	1891.	1892.	1893.	1894.
Birth-rate....	30.1	28.0	32.8	33.2	27.8	31.5	23.8	27.1	24.4	29.0	24.9
Death-rate ..	11.6	15.5	15.4	15.0	11.9	18.6	10.6	13.0	15.7	11.8	9.0

ALBURY—

Birth-rate....	29.7	25.1	31.2	30.0	27.4	27.5	23.0	24.0	24.8	24.5	21.2
Death-rate ..	15.9	13.8	15.3	14.0	10.9	12.5	14.1	17.5	14.6	11.2	11.0

GUILDFORD—

Birth-rate....	38.9	42.0	44.4	36.0	29.0	25.1	28.0	30.9	27.8	22.1	28.5
Death-rate ..	15.2	13.5	17.0	15.7	9.4	10.5	10.8	15.1	15.6	10.3	8.2

WOKING—

Birth-rate....	33.7	36.0	33.3	36.1	30.6	29.0	30.6	29.0	28.0	32.7	22.2
Death-rate ..	13.1	15.0	16.4	11.9	12.6	13.0	16.0	14.3	16.7	13.4	12.4

GODALMING—

Birth-rate....	27.0	31.0	30.0	28.0	26.3	26.3	22.0	25.8	22.8	31.3	16.2
Death-rate ..	13.0	12.2	14.3	14.4	12.7	11.5	15.0	15.4	10.5	17.2	9.0

NOTE.—*In calculating these Death-rates, each Sub-district has been debited with the deaths in the Workhouse, in the Isolation Hospital, and in the County Hospital, of persons belonging to it as well as with the deaths which actually occurred in each Sub-district.*

V. Summary of Sickness and Mortality during the Year from the Seven Principal Zymotic Diseases, and of certain other Diseases which have to be notified under the Infectious Diseases (Notification) Act, 1889.

1. *Small-pox.* There was no case notified during the year.

2. *Scarlet Fever*, otherwise called *Scarlatina*. Altogether 39 cases were notified in 31 houses, and 24 of the patients were removed to the Isolation Hospital, as against 205 cases in 118 houses in 1893, of whom only 69 availed themselves of the Isolation Hospital. Of these 39 cases last year, none proved fatal.

In the *first quarter* of the year :—five cases occurred in January, one at West Clandon, the origin of which was untraced ; the other four cases were at West Horsley, the first two cases having broken out in a house almost adjoining previously infected premises ; the fifth case was associated with these latter cases at School. Three out of the five cases went to Hospital.

In February another case occurred at West Horsley, associated with the same cause, and a case at East Horsley was untraced. A third case occurred in a previously infected house at Perry Hill, Worplesdon. The fourth case was at the Master Tailor's Shop at the Barracks, Stoughton, and the patient went to Hospital, and the Military Authorities thoroughly disinfected the shop and everything in it. A fifth case occurred at Witley, and was imported from Shalford, and the sixth case was notified from Ripley. The seventh and last case was in a farm-house in the Parish of S. Nicholas, and was apparently contracted in the Borough. Five out of the seven patients went to Hospital.

Six cases occurred in March, two of which went to the Hospital. Two were in previously invaded premises, namely—King Edward's School, Witley, where there was an epidemic in the previous year, and the other at a farm house in S. Nicholas, alluded to in February. A case at West Horsley was imported from Cobham ; a case at East Horsley was untraced ; one at West Clandon was imported from Surbiton ; and the sixth and last case occurred at Ripley Green.

In the *second quarter* of the year only six cases were notified, and two went to Hospital. The first was in April, and was imported from Bermondsey into a Church House of Rest at Merrow. The second and third were in May, one being another case at King Edward's School, Witley, whilst the third case was at Ockham, and was untraced. Of the three cases notified in June, the first was imported into the house of a lady of title at Witley, by her servant from London; and thence the disease was conveyed by a lady visiting the premises to a residence in Van Lane, Godalming Rural. The last case was in previously infected premises in Stoke Rural.

In the *third quarter* of the year nine cases occurred in eight houses, three of which had been previously invaded, whilst three of the cases were directly imported from without the District. Five of the cases went to Hospital. The previously invaded premises were at Perry Hill, Ockham, and Stoughton, and were responsible for four fresh cases. Of the imported cases two came from S. John's Wood, London to Albury, and the third—at West Clandon—appeared to have been contracted at a “Bean-feast;” one of the remaining cases was at Stoughton, and was associated with the case just alluded to at Stoughton, whilst a third case at Bellfields was of a doubtful nature.

In the *fourth and last quarter* of the year eight cases were notified in four premises, namely, one at Tuesley (Godalming), one at Ockham Corner, one at East Horsley, four in High Path, Merrow, and one in Down Road, Merrow. With the exception of the case at East Horsley, all went to Hospital. The case in the Down Road, Merrow, I could not trace, but three cases in one house in High, Path, Merrow, were traced to the Charlotteville School, in the Borough, where other cases had occurred, and thence the disease was conveyed to the other house in High Path. Except that the disease had existed in Ripley in the autumn, it was difficult to trace the case at Ockham Corner. The case at East Horsley was a child in the Railway Cottages, near the Station, and except that in the early part of the year the child was in association with Scarlet Fever in a West Horsley School-child, and may possibly have retained the infection in its clothes all this time, no other clue was forthcoming.

3. *Diphtheria.* Altogether 40 cases were notified in 28 houses, and 29 of the patients went to the Isolation Hospital, as against 283 cases cases in 127 houses, and of whom only 95 went to the Isolation Hospital in the previous year.

In the *first quarter* of the year there were 20 cases notified in 12 houses ; 17 of the patients went to Hospital, and five of the 20 cases proved fatal. Seven cases were notified in January in three houses, and one died. Six patients went to Hospital, where one died. The first case occurred in some dilapidated cottages near a foul ditch in Worplesdon. The next case was imported from Midhurst, and was notified from Stoke. In the same month four cases in a house at Holmbury S. Mary were notified, and were contracted from a cottage in the Dorking Rural District, where the disease was in existence, and the children from the two cottages played together ; one of these cases proved fatal at its home, and three were sent to the Hospital, where one was also fatal. The third case occurred in a man at Stoughton, who had suffered for some considerable time with chronic sore throat, culminating eventually in Diphtheria, and was treated in the Hospital.

In the month of *February* there were five notifications in four premises, and four of the patients went to the Hospital, where one died. Three of the cases occurred in some previously infected premises at Normandy; one occurred in the Militia Cottages, Stoughton, and was imported by a child from London, who had recently had Diphtheria ; whilst the fifth case was at Merrow, and was also imported by a relative, who had just returned from nursing a Diphtheritic case without disinfecting her clothes.

Eight cases were notified in five freshly invaded premises in the month of *March*, and seven of the cases were removed to the Isolation Hospital, where two proved fatal. Three of the cases, namely at Stoughton, Holmbury S. Mary, and Stoke, were in premises where the disease had existed earlier in the year. A case at Worplesdon came from the Borough, where the patient was in service, whilst another at Worplesdon could not be traced. The fourth case occurred in Stoke, in a house where "Sore Throat" had existed for some weeks. The remaining two occurred at Stoughton, and had undoubtedly been on the same premises together, where the case referred to in January had arisen. Both went to the Hospital, and one patient died.

In the *second quarter* of the year there were eight notifications in seven houses three of which had been previously invaded ; all the patients went to Hospital except one, and two died. The first case was notified in April from a laundry at Stoke, and was probably imported there by the patient—a laundry maid. The next two cases were in previously infected premises at Stoughton, as were also two cases which occurred at Worplesdon. The next three cases occurred

in May ; one at Slyfield Green was of a doubtful nature, and did not go to Hospital ; the second arose in the Church of England Institute at Bisley Camp ; and the last case occurred in previously invaded premises at Merrow, and proved fatal. There was no notification during the month of June.

In the *third quarter* of the year six cases were notified in four houses, and four of the patients were treated in the Hospital. The first case arose in July, at Send, and the patient died on its road to the Hospital. A case in Avenue Terrace, Stoke, was of a doubtful character. The four remaining cases were notified from two adjoining houses in Stoughton, three having occurred in one house in quick succession, the only clue being a patient who had been discharged from the Homerton Fever Hospital to this house some two or three weeks previously.

During the *last quarter* of the year there were only six cases in four premises, and one case went to the Hospital, whilst two died at their own homes. One in Stoke was of a doubtful character. Two others in Stoke were contracted at Ventnor, and one died. Two others occurred in a nobleman's residence in the parish of S. Nicholas, where "Sore Throat" had existed for several weeks ; one of these patients—a nurse—went to Hospital. The sixth case was a child, also in S. Nicholas Parish, and proved fatal.

4. Of *Enteric* (otherwise called *Typhoid*), three cases were notified during the year in three houses, and one went to the County Hospital. The first case was notified from Send, and the disease was contracted at Midhurst, in the month of January. The next case was notified in December, from Godalming Rural, and supervened in a Coachman, who undoubtedly contracted the disease at Dublin, and he was treated in the County Hospital. The third case was also notified in December, from Albury, and was of a somewhat doubtful character. A fourth and doubtful case occurred in Stoke, and ended fatally, but it was not notified, nor was the death certified, though registered as Typhoid.

5. *Measles* were not very prevalent, and only caused one death.
6. There was no death from *Whooping Cough*.
7. *Diarrhœa* caused three deaths, and two were in children under five years of age.

The total number of deaths from these seven diseases was 21 (as against 51 in the previous year), which represents an Annual Zymotic Death-rate of 1·2 per 1000 of the estimated population.

The following *Table* also shows the number of deaths in the District (excluding the deaths of non-parishioners in Public Institutions) from these seven diseases during the year 1894, and the ten preceding years, and the *Zymotic death-rate* for each of those years.

YEAR.	Small Pox.	Measles.	Scarlet Fever.	Diphtheria.	Whooping Cough.	CONTINUED FEVER			Diarrhoea.	TOTAL.	
						Typhus.	Enteric or Typhoid.	Other kinds		Number.	Rate per 1000 of the Population.
1884	...	3	3	4	9	...	5	...	25	49	1.7
1885	4	6	1	5	3	...	5	...	18	42	1.5
1886	1	14	1	1	23	...	1	...	16	57	1.9
1887	...	20	6	6	6	...	4	1	5	48	1.6
1888	...	3	2	1	4	...	5	1	3	19	0.7
1889	...	4	2	6	8	...	6	...	8	34	1.1
1890	...	18	1	2	13	...	3	...	9	46	1.5
1891	...	4	2	7	12	...	2	...	4	31	0.9
1892	..	2	1	9	6	...	...	...	9	27	0.8
1893	...	1	2	33	1	...	4	...	10	51	1.8
1894	...	1	...	16	...	...	1	...	3	21	1.2

Of the other Diseases to which the Infectious Diseases (Notification) Act, 1889, applies, the following cases were notified, viz.:

Of *Membranous Croup*, one case, which proved fatal.

Of *Erysipelas* there were thirteen cases in thirteen houses in the following parishes:—Godalming (Rural), 1; Albury, 1; Shere, 4; Send, 1; Wisley, 2; Stoke (Rural) 4. Only two of these cases were of Public Health importance, and these both occurred after recent Vaccination; in one case a drain was untrapped in a room or kitchen adjoining, whilst in the other case the mother had an ulcerated leg, and was nursing the child in the same bed.

No case of *Puerperal Fever* was notified during the year.

VI. Action taken for Preventing the Spread of Infectious Disease.

As to *Scarlet Fever*. I have visited (with one or two rare exceptions where quite unnecessary) every infected house and every possibly infected house. I have put myself in immediate communication with the School Authorities. I have stopped all School attendance from every infected house and every possibly infected house. I have not resorted to the closure of Schools for Scarlet Fever during the whole of the year, though I know they are sometimes the means of propagation of the disease. It seems to me—as it does to the well-known Medical Officer of Health of Maidstone, (Mr. M. A. ADAMS, F.R.C.S.)—that closing School, for this disease, is seldom necessary, and often mischievous, and that having every infected case under supervision, there is less risk incurred in keeping the other children together at School and under discipline and intelligent observation, than by sending them home to run loose into the villages and streets and out of sight, and beyond the reach of discipline. Anyhow I have completely checked in the way I have described every outbreak during the past year.

As to *Diphtheria*. During the year I kept a careful supervision over the throats of at least nearly all the children attending School, and printed notices were sent to every School in recently infected Districts, and School Managers and Attendance Officers were asked to exercise the greatest precaution on the re-assembly of the Scholars after holidays. During the past year, after the re-assembly of the Schools, I have, as far as possible, personally examined the throats of the children attending the principal Schools, and sometimes at the homes of the children where "*Sore Throat*" has been prevalent, but more especially at the Schools themselves. At the latter I adopt the following method:—armed with a couple of nickle-plated tongue depressors, a few clean towels, and a laryngeal mirror, I ask for one or two basins of hot water, which I frequently change. Whilst examining the throat with one tongue depressor the other remains in the water, and in this way I systematically examine, at suitable times, every child attending School, and I rigidly exclude every child where there is the least suspicion of "*Sore Throat*," and with few exceptions I have been able to keep these cases from School till the throat has become normal. If the *Diphtheria bacillus* is available, the chances of a normal throat being attacked is nothing compared to what would occur in the presence of sore throats generally. In some cases of enlarged tonsils and elongated uvulæ

I have advised removal, and this has usually been adopted where recommended. It is obvious that if the Schools are attended only by children with normal throats the risk of infection by *Diphtheria* is minimised, and given that the Medical Officer of Health only has the time, an inspection of the Schools on first assembling after holidays must be an invaluable preventive method. I can say very positively, that since I have adopted this measure I have noticed a marked absence of *Diphtheria*, or, anyhow, a remarkable diminution of the disease in those Districts where the disease was formerly so persistently prevalent. I need scarcely say I visited all the initial cases, and absolutely excluded all members of the infected houses from Schools. Further, it should be noted, that having all the throat cases under supervision and discipline, occasion does not seem to arise for closing the Schools, and I have not closed one single School for Diphtheria in any District during the past year. On the other hand, I naturally play havoc with the School Attendances in weeding out all the throat cases, however trivial; and it is high time the Educational Acts were adapted to the times, and that if the School Grants are made according to the average attendances, that those cases, in the interests of the Public Health, excluded from attendance by the Medical Officer of Health or by other Medical Certificate should count as though they were actually attending during the whole of the absence prescribed.

The following further action, as adopted by my predecessor, was taken for preventing the spread of some of these diseases:—The houses infected with *Scarlet Fever*, *Diphtheria*, *Erysipelas*, *Membranous Croup*, *Puerperal Fever*, *Doubtful Continued Fever* or *Enteric Fever* were visited; disinfectants were supplied, and their proper use explained; isolation of the sick was inculcated, and was, in many cases, secured by their removal to the Sanitary Authority's Isolation Hospital; nuisances, when found on the premises, were abated as far as was practicable; the well water, when suspected, was analysed; and after the recovery, death, or removal of the sick, the final cleansing and disinfecting of the houses and articles were secured, the first stage of the disinfection, viz., that by sulphur-fumigation, having been performed at most of the cottages by the Sanitary Inspector. Infected articles were removed from most of the houses, together with the patients, and from many other houses after the illnesses were over and were disinfected by hot air at the Isolation Hospital; infected articles were also destroyed at several houses, and compensation was given.

A synopsis of all patients treated in the Hospital during 1894 appears under Sect. VII., *Page 22.*

VII. Guildford, Godalming, and Woking Joint Hospital Board.

1. *Isolation Hospital.*

In the early part of 1893, the Local Government Board issued their Provisional Order forming the Guildford Rural, Guildford Urban, and Godalming Urban Sanitary Districts into an United District, for the purpose of providing an Isolation Hospital for the joint use of persons residing in the United District, and the Order was subsequently confirmed by Parliament. The Parish of Woking was then included in the Guildford Rural District, and shortly after the formation of this Parish at the end of 1893 into an Urban Sanitary District I strongly urged the new Authority to make application for the admission of their District into the existing United District.

A Local Government Board Enquiry was held at the Town Hall, Guildford, on the 1st of *February*, 1894, and was conducted by Thomas Codrington, Esq., M.Inst.C.E., with regard to adapting the Provisional Order to the representation of the newly-constituted Woking Urban District.

An Order was subsequently issued by the Local Government Board under Article XXI. of their Provisional Order of the 27th of *April*, 1893, and under the style of the " Guildford, Godalming, and Woking Joint Hospital Board," Woking was henceforth entitled to two representatives on the Board, Guildford Rural five, Guildford Urban four, and Godalming two. The representations were based on the respective populations and not on the rateable valuations.

On the 1st *February*, at the Guildford Town Hall, a second Local Government Board Enquiry was conducted by Thomas Codrington, Esq., M.Inst.C.E., and H. T. Bulstrode, Esq., M.D., as to the application of the Joint Board for sanction to borrow £8,000 for the provision of a Hospital. This was to purchase from the Rural Sanitary Authority their Hospital premises and furniture at an agreed sum of £5,926, and one acre of land belonging to the Guildford Corporation and adjoining the Hospital, for £315. The remaining £1,759 which made up the £8,000 would be required for alterations and additions to the premises, including a new Washington Lyons Steam Disinfecting Chamber and a Laundry, &c.

On the 17th *July*, 1894, the Local Government Board sanctioned the borrowing of £5,900, and £600 for Hospital purposes, and on condition that the Small-pox patients should not be treated on the same site. The loans

having been borrowed from the Liverpool Victoria Legal Friendly Society for thirty years and fifteen years respectively at $3\frac{1}{2}$ per cent., the purchase money of £5,926 for the Hospital premises and £315 for the acre of land adjoining having been paid, the properties were transferred to the Guildford, Godalming, and Woking Joint Hospital Board on the 29th *September*, 1894. The balance was held in reserve for the proposed alterations, which, however, had not been commenced before the close of the year, though urgently required for the greatly-increased demands on the Joint Board Hospital, particularly with respect to the nursing accommodation, disinfecting apparatus, and proper baths for the patients, &c.

At present there is accommodation for 40 patients, allowing each patient 2000 cubic feet air space and 140 square feet floor space per bed. This number of patients should never be exceeded.

2. *Isolation for Small-pox Patients.*

The Local Government Board having refused their sanction to any loan for the Joint Hospital Board so long as Small-pox patients were treated on the same site, it became necessary to look for a site elsewhere for the treatment of such cases. The difficulty was increased from a statement of the Local Government Board that it was not their practice to sanction any loan for the erection of a Small-pox Hospital which would have within a quarter of a mile of it as a centre either a Hospital, whether for infectious diseases or not, or a Workhouse or similar establishment, or 30 to 40 dwellings (150 to 200 inhabitants); or for the erection of a Small-pox Hospital which would have within half a mile of it 90 to 120 dwellings, or one or more institutions which, collectively and with any dwellings, contain some 500 to 600 inhabitants. The Joint Board were also given to clearly understand that they would not receive the sanction of the Local Government Board to any future loan should a Small-pox Hospital be erected within half a mile of their Isolation Hospital at Woodbridge; and, on the other hand, no Small-pox Hospital would receive the sanction for any loan if erected within a similar distance from the Isolation Hospital.

On the 6th *October* the Joint Board purchased for the sum of £400 a cottage and nearly three acres of land in an isolated position on Whitmoor Common, in the Parish of Worplesdon. The site comes well within the above recommendations of the Local Government Board, and is situated very conveniently for all the combined Districts, being about three miles from Guildford

and Woking, and about seven from Godalming. Legal proceedings were, however, commenced in November by Richard Garton, Esq., and other inhabitants of Worplesdon with the view of preventing the Joint Hospital Board using the acquired cottage and site for the treatment of Small-pox patients. The proceedings were in abeyance at the end of the year, pending some negotiations between the plaintiffs and the Joint Board, and should these negotiations fail they have given notice that they will issue a writ in the High Court of Justice, Chancery Division, to restrain the Joint Board by an Injunction of the Court from using any part of the premises or site above referred to for the purposes of treating Small-pox patients.

3. *Synopsis of Cases in the Isolation Hospital, 1894.*

One hundred and sixty-four patients were treated in the Hospital during the year 1894. At the commencement of the year there were remaining in Hospital 32 patients—namely, *Scarlet Fever*, 21; *Diphtheria*, 10; and *Typhoid*, 1. Of the 21 *Scarlet Fever* patients, 8 belonged to the Guildford Rural District, 3 to the Borough of Guildford, 3 to the Borough of Godalming, and 7 to the Woking Urban District; of the 10 *Diphtheria* patients, 4 belonged to the Guildford Rural District, 3 to the Borough of Guildford, 3 came from the Stoughton Barracks, and the case of *Typhoid* came from Godalming. During the year there were 132 fresh admissions—namely, *Scarlet Fever*, 75; *Diphtheria*, 56; and *Typhoid*, 1. Of the 75 cases of *Scarlet Fever*, 24 belonged to the Guildford Rural District, 11 to the Borough of Guildford, 7 to the Borough of Godalming, and 33 to the Woking Urban District. Of the 56 admissions from *Diphtheria*, 30 belonged to the Guildford Rural District, 17 to the Borough of Guildford, 1 to the Borough of Godalming, and 4 to the Woking Urban District, whilst 2 were accidentally admitted from Holmbury S. Mary, in the Dorking Rural District. The case of *Typhoid* came from Woking.

There were 13 deaths in the Institution, and all from *Diphtheria*; 6 deaths occurred in patients belonging to the Guildford Rural District, 5 to the Borough of Guildford, 1 to the Urban District of Woking, whilst the last belonged to Holmbury S. Mary, in the Dorking Rural District.

They were only two “return” cases during the year—both *Scarlet Fever*—and both from the same family in Woking.

The number of persons who were admitted into the Hospital, and the number who died there in each year, since the Hospital was opened, with the nature of their illness is shown in the following Table:—

From what Districts.	YEARS.	Small Pox.		Scarlatina.		Diphtheria.		Enteric Fever.	
		Cases.	Deaths.	Cases.	Deaths.	Cases.	Deaths.	Cases.	Deaths.
Guildford (Rural)	1885	3	...	...	...	...	...	...	...
	1886	2	1	4	...	2	...	...	...
	1887	...	...	25	1	8	1	5	3
	1888	...	...	14	2	4	...	7	2
	1889	...	...	54	1	3	2	11	5
	1890	...	...	18	...	5	...	9	...
	1891	...	...	12	...	14	4	2	1
	1892	...	...	31	1	19	2	2	...
	1893	...	...	80	...	94	33	1	...
	1894	...	...	24	...	30	6	...	...
Guildford (Urban)	1893	14	4	12	...	23	12	1	...
	1894	...	...	11	...	17	5	...	...
Godalming (Urban)	1893	...	...	9	...	...	...	1	...
	1894	...	...	7	...	1	...	...	...
Farnham (Rural)	1893	...	...	...	...	3	1	...	...
Dorking (Rural)	1894	...	...	...	...	2	1	...	...
Woking.....	1894	...	...	33	...	4	1	...	...

VIII. Summary of other proceedings which were taken during the year, under the Sanitary Acts, &c.

1. *Parochial Committees* were abolished for the Parishes of Ripley, Shere and Pirbright, and for the contributory places of Stoke (Rural) and S. Nicholas. Woking, as stated early in this Report, was constituted on Urban District at the end of 1893. The following important Committees were, however, appointed:—(a) Send and Ripley Drainage Committee, (b) Stoughton Drainage Committee, (c) Pollution of Tillingbourne and Provision of Sewers Committee.

2. *Nuisances.* The Inspector's statement as to the Nuisances which were dealt with during the year will be found on page 33. Among other matters which engaged attention were:—(a) The foul state of certain ditches at Stoughton, which can only be effectually remedied by the provision of sewers for that part of the District; (b) the damp, dilapidated and otherwise insanitary condition of certain cottages at May's Green, Ockham, Merrow, and other places which were dealt with under the Public Health Act, 1875, sect. 91;

(c) the provision of certain drains and cesspools as required by sec. 23 of the Public Health Act, 1875, and numbering altogether 25 in various parts of the District; (d) the nuisance caused by the deposit of house refuse at Cross Lanes in the Epsom Road.

3. *Bye-laws relating to New Streets and Buildings.*

The following information up to the end of 1893 concerning the working of these Bye-laws in the respective Districts is obtained from my predecessor's Reports, whilst I am indebted to the Authority's Surveyor, Mr. James Dewhirst, for particulars of what has been done during the past year.

	CROWNPIITS.	CHARTERHOUSE.	FARNCOMBE.	STOKE.	WORKING.	PIRBRIGHT.	ST. NICHOLAS.
Number of new buildings for which plans were submitted for approval under the Bye-Laws in	1883...	10	4	6	71	...	...
	1884...	17	16	8	44	120	...
	1885...	17	8	13	25	98	1
	1886...	18	3	7	31	101	5
	1887...	29	5	21	23	93	8
	1888...	4	12	13	16	74	1
	1889...	11	5	7	24	127	3
	1890...	1	15	5	28	92	10
	1891...	7	7	9	33	61	7
	1892...	...	...	...	37	99	13
	1893...	...	...	...	31	124	6
	1894...	...	...	...	28	...	1
Number of new streets	1883...	...	...	...	...	...	...
	1884...	...	1	...	...	1	...
	1885...	1	1	...	1	3	2
	1886...	...	1	...	2	1	1
	1887...	...	...	...	2	...	1
	1888...	...	...	...	3	1	...
	ditto	1889...	1	...	1	...	...
		1890...	...	...	...	2	...
		1891...	...	...	5	...	...
		1892...	...	...	1	2	...
		1893...	...	...	1	...	...
Number of times that legal proceedings were taken for breach of the Bye-Laws as to new streets and buildings in	1883...	...	...	...	...	1	...
	1884...	...	...	...	...	1	...
	1885...	...	...	...	...	2	...
	1886...	1	1	...	...	...	...
	1887...	...	...	...	1	...	...
	1888...	...	...	...	1	...	1
	1889...	...	...	...	...	...	1
	1890...	...	...	...	...	...	...
	1891...	...	...	...	1	...	...
	1892...	...	...	...	...	...	...
	1893...	...	...	...	...	3	...

In April 1893 the Sanitary Authority discussed and negatived the question of applying to the Local Government Board to be invested with power to make Bye-laws, under sec. 157 of the Public Health Act, 1875, relating to new streets and buildings in the remaining parts of their District.

4. *Water Supply.* Samples of water were sent for analysis during the first half of the year to the Medical Officer of Health, and during the second half of the year to Samuel Rideal, Esq., D.Sc. (Lond.), who was appointed Analyst from July 1st.

Samples were sent from altogether seven wells which were intended for the supply of water to new houses in the District, and, in two instances in which the Analyst was obliged to report unfavourably of the water, the Sanitary Authority withheld the *Water certificates* which had been applied for, under sec. 6 of the Public Health (Water) Act, 1878. The Inspector states that the number of such certificates which were granted during the year was 32 in respect of 46 houses, 37 of which were supplied from the mains of the Public Water Works, and the others from private wells or tanks.

Samples of water were also sent from suspected wells in various parts of the District, with the result that some polluted wells, and some of doubtful quality, were closed, and a supply obtained from the mains of one of these Companies. (See also the following table.)

TABLE, showing the number of samples of potable water, which were sent to the Medical Officer of Health for analysis, during the year, from private wells in the District, with the results:—

Situation of the Premises from which the samples were taken.	NUMBER OF SAMPLES FOUND			Total number analysed during the year 1894.	Number of Owners, who, on receipt of notice, took a supply of water from the Co.
	So polluted as to be injurious to health.	Sus- picious or doubtful.	Good		
Godalming (Rural).....	2	...	4	6	6
Pirbright.....	...	...	...	...	...
Stoke	3	4	1	8	5
Albury	1	...	1	2	...
Worplesdon	1	...	1	2	...
Ockham	1	...	...	1	...
Shere	1	...	...	1	...
Compton .....	...	...	1	1	...
Artington	1	...	...	1	...
Ripley and Send.....	1	4	...	5	1
TOTAL IN 1893	11	8	8	27	12

During the year I again called the attention of the Authority to the Water Supply at *Mayes' Green, Ockham*. Some of the cottages are still supplied only with rain water from underground tanks, and these teem with animalculæ; whilst other cottages depend upon their supply from a pond crowded with animal and vegetable life. The children of some of the latter cottagers suffer from the large round worm—(*ascaris lumbricoides*)—pathognomonic of those who habitually drink this class of unwholesome water.

5. *Dairies, Cowsheds and Milkshops Order.* There is a considerable decrease in the number of Cowkeepers, etc., on the Register as compared with last Report, owing to a large number being absorbed by the newly constituted Urban District of Woking, and the extensions of the boundaries of the Borough of Godalming.

The Inspector makes the following Return for the year ending December 31st, 1894:—

Number of Registered Cowkeepers, Dairymen, and Purveyors of Milk on the Register at commencement of year	125
Number since registered	8
Number struck off or discontinued	52
Number at present on Register.....	73
Number of registered Premises inspected	93
Total number of visits to Premises	105
Number of Cowsheds, &c., at which improvements in lighting, ventilation, drainage, cleansing, or water supply have been made.....	6
Number of Cowsheds, &c., found in a filthy state	5
Number of Premises at which milk vessels were found in an unclean state ...	1

6. *Housing of the Working Classes Act, 1890.* I again called the attention of the Authority to four cottages at Maye's Green, Ockham, which I reported in 1893 as being in a very insanitary condition, and without any water supply except from a pond. In October I visited the cottages accompanied by the Medical Officer of Health for the County. The result of the conference was that I advised the Authority to take action forthwith under Part II., sec. 32. Some cottages in the Village of Merrow were dealt with under the Public Health Act, 1875.

In October I pointed out to the Authority the powers they had under Part III., and as to whether it would not be worth their while to avail themselves of those powers, taking into consideration the depopulation of the Rural Districts.

7. *Rivers Pollution Prevention Act, 1876.*

(a) POLLUTION OF RIVER WEY BY CERTAIN LAUNDRIES. In the month of June the attention of the Authority was drawn to the pollution of the Wey by certain laundries at Compton and Langham sending their effluents into the river. I subsequently made a careful inspection of that portion of the Wey, and accompanied by the Medical Officer of the County and the Sanitary Inspector, took samples of the effluents for analysis. The result was that notices were served under sec. 3, and the Laundries undertook to adopt the best practicable and available means for rendering the effluents harmless. The Langham Laundry was negotiating arrangements for discharging its effluent into the new sewers now in course of construction and nearly complete and belonging to the Borough of Godalming.

(b) THE THAMES CONSERVANCY BOARD drew the attention of the Authority in January as to the overflow of untreated sewage from the tanks at Ripley. In February they wrote with reference to the pollution of the Ockham Mill Stream from the Ripley Sewage Field; again in May a Report was received from the Board's Inspector that the effluent from this field was still very unsatisfactory; finally they communicated with the Authority in December with reference to the pollution of this stream from the same cause. In March the conservancy Board wrote to the Authority as to arrangements for the Drainage of Stoughton.

8. *As to proposed Works of Sewerage and Sewage Disposal.*

(a) ALBURY SCAVENGING SCHEME. This scheme is worked on the voluntary system by a committee, and includes the collection and disposal of the contents of earth closets and cesspools, and the disposal of sink water.

(a) *Earth Closets.* In order to cope with the work of dealing with the excremental matter it has been found necessary to convert the privies formerly in use into earth closets. There are now about 38 in operation, and I think the time is not far distant when the whole of the privies in the village will be converted into earth closets.

The receptacles which are moveable are of galvanized iron costing 4/- each, and are emptied twice a week by a cart and conveyed to land about half-a-mile from the village, where the contents are used as manure. The collection is made between the hours of 6 and 7 a.m. The area used is a narrow strip about half-a-mile long, and the working cost is 2d. per week per closet.

(β) *Cesspools.* These receive the discharges from water-closets only, and are of a capacity varying from 800 to 2,750 gallons, and are constructed of brickwork faced with cement. In the construction of these cesspools considerable difficulty was experienced in dealing with the strong springs of water which were met with whilst the cesspools were in course of construction, and it was found necessary to resort to continual pumping day and night. Some of the springs were of considerable volume and added materially to the cost of construction. It was, however, imperative that the cesspools and each joint of the drains should be perfectly watertight, otherwise the subsoil water would have encroached and added considerably to the cost of emptying.

A permanent iron suction pipe is fixed in each cesspool, terminating a little above the crown of the dome. This projecting pipe is fitted with a brass cap and gun-metal screw, and protected when not in use by a cast-iron cover. When the cesspool has to be emptied the sewage pump is placed near the pipe, the brass cap is removed and a spiral suction hose attached by a brass union; one end of the delivery hose is then fixed to the pump, and the other to the projecting inlet in the top of an air tight sewage cart by similar brass unions. When these joints are properly secured pumping proceeds without any offensive odours escaping. It takes about ten minutes to fill the cart (holding 250 gallons), and when it is full the hose is disconnected, the caps replaced and the sewage carted to the farm, where it is mixed with soil and lime and applied as manure to the land. Although provision is made for emptying the cesspools during the night, the Committee have not yet been asked to do so as no nuisance has so far been experienced.

There are 22 cesspools at present in use, serving 18 houses and distributed over a narrow area about $1\frac{1}{2}$ miles long. The charge made for emptying is 2/6 per load of 250 gallons. I cannot say what the cost of the construction of the cesspools has been, but the plant—consisting of one tumbrel cart, one air tight sewage or cesspool cart, 22 pipes in cesspools, brass and iron caps, pump, suction and delivery hose, wrenches, &c., complete—cost £100.

(γ) *Disposal of Sink Water.* Sink water is conveyed by separate drains into settling tanks, from which it is discharged on to filter beds of stone and gravel, 3-feet in depth and about 4-feet in diameter. From the filtering beds it passes into lateral drains constructed of stones and gravel, and ultimately filters through the earth into the stream. These filters require to be taken out and

washed occasionally. The length of time they keep in order varies considerably with the amount of work they have to do. If reasonable care is used it may not be necessary to wash them more than once in two years, but with indifferent use once in six months may not be sufficient.

(b) STOUGHTON : DISPOSAL OF SEWAGE AND REFUSE. Arising out of a systematic "house-to-house inspection" of nearly the whole of Stoughton, the following matters were noted as shewing the present method of disposal of house refuse and drainage.

(a) *Ashpits.* Only about 10 per cent. of the houses visited were provided with ashpits having proper doors and coverings, and the ashes and garbage were allowed to accumulate in heaps to a dangerous extent, being ultimately dug into the gardens, or deposited conveniently close to the river so as to be gradually washed away.

(β) *Privy Vaults* are used in great numbers. Pail closets are not used as much as might be expected. When these are emptied a large hole is dug in the garden, and the contents emptied into it, and in those cases where cesspools are provided and require emptying the same method is resorted to with the consequence that in the gardens of small area the ground is becoming overcharged with the filth, and must ultimately react in an injurious manner on the health of the neighbourhood.

(γ) *Drains.* In a great many cases the drains from the houses run directly or indirectly into the River Wey.

In one case in Stoughton Lane 19 houses are connected by a system of drainage and apparently deliver directly into the river. In another case 36 houses forming Stoughton Terrace deliver by a system of drainage into a ditch which joins the river near Cemetery Road.

At the rear of some of the houses in Stoughton Road is a large filthy ditch, "Stoughton Ditch," which receives a large number of drains, cesspool overflows, &c., and which should if possible be abolished.

At the rear of other houses in the Stoughton Road are a drain and ditch which empty below Bowyer's Mill, made presumably to take the flood water from the gardens, but now used to a great extent to connect overflows from cesspools.

Remedy.—Scavenging for house refuse, sewers for water-closets and drains. I have advised the Authority—a “systematic scavenging scheme,” or better still scavenging for house refuse, and sewers for the water-closets and drains to replace the cesspools in this porous soil.

(c) STOUGHTON BARRACKS. Average daily population about 360. The main drain comes out at the rear of the Barracks—the portion known as the hospital end—and about ten feet from the wall there is an inspection chamber. It then continues for some short distance and discharges into some tanks in a field let to a greengrocer and gardener. The solids are supposed to collect in these tanks, and the effluent then discharges into the ditch which runs into Briton’s Pond, about a mile-and-a-half away, in the parish of Worplesdon.

(d) RIPLEY SEWERS. The Village of Ripley is provided with sewers constructed of stoneware pipes, varying in size from 6 inches to 12 inches in diameter.

At frequent intervals in the line of sewers, there are catch-pits formed below the line of invert for the purpose of retaining the solids, and these catch-pits require cleansing at frequent intervals, which is done by a contractor.

The sewers were not intended to receive the discharges from the water-closets, but a very large number do discharge into the sewers. About twelve months ago some regulations were adopted making it compulsory that the surveyor should see every drain connected to the sewer, and since that time no more water-closets have been connected to the sewers, cesspools having to be provided. The Village is therefore in the peculiar position of having a system of sewers and also having to provide cesspools.

Owing to the slight gradients and the frequent break of the current in the sewers by the sunk catchpits the sewers are not self-cleansing, and rely for flushing on the rain water from the roads.

No attempt at ventilation is made. In a small system of sewers like this it is surprising to find there are two outfalls, and consequently two places where the sewage must be treated before being turned into the streams. One of these, at Homewood Farm, receives by far the larger amount of sewage, and is about two acres in extent. The ground has never been properly prepared, and there are no precipitation tanks. The crude sewage has been discharging on this piece of ground, receiving no proper attention for several years, until now the ground is in an altogether unfit state to receive the sewage.

The other outfall is on Ripley Green, where small precipitation tanks are provided, and the sewage, after being allowed to precipitate, is passed on to about $\frac{3}{4}$ of an acre of ground, a portion of which is underdrained at a depth of about 3 feet ; the sewage is distributed on the surface, and filtering through the ground is discharged as a clear effluent.

(e) GOMSHALL AND SHERE AND THE POLLUTION OF THE TILLINGBOURNE BROOK. On the 24th January the Local Government Board issued a Memorandum as to Col. Ducat's Report with regard to the Enquiry held by the Board at Shere in September, 1893. As a result of the Enquiry the Board were strongly of opinion that a comprehensive sewerage scheme for the above contributory place was the only solution of the difficulty. The Board considered it necessary that the sewage should be conveyed to some distance from the dwellings by drains, and then subjected to a proper system of filtration, including land treatment ; and they would not consent to the provision of dumb-wells or garden irrigation on account of the porous nature of the soil, and the danger of getting the wells contaminated, from which most of the drinking water is obtained.

Colonel Ducat made a further inspection of the Villages on the 27th November last year ; and in December the Local Government Board wrote to the Clerk of the Guildford Rural Sanitary Authority, forwarding copies of an Order issued by the Board on December 22nd, with reference to the provision of sewers in the villages of Gomshall and Shere. The Board having considered the Report of their Inspector, Colonel Ducat, R.E., relative to the complaint that the Rural Sanitary Authority had made default in providing sufficient sewers, the Board found that there had been default, and issued an Order directing the Authority to perform their duty within three calendar months from the date of the Order, so far as it related to the villages of Gomshall and Shere.

9. *Regulations for Burial Grounds, 1863.* In the month of February the attention of the Authority was drawn to a serious contravention of clause 8 of these Regulations, where it is laid down that no coffin containing the body of an adult shall be buried within four feet of the ordinary level of the ground. In January, at Pirbright churchyard, the burial of an adult took place only nine inches beneath the ground level, though the Vicar of Pirbright, *de ipso facto* the Pirbright Burial Board, asserted it was buried twenty-seven inches, and wrote to the London press stating that thirty-six inches was the regulation minimum depth. Under the circumstances it was only left to appeal to the

Home Secretary for his License for exhumation and reburial. It is only fair to the Vicar of Pirbright to state that there was no wilful intention of contravening the Regulations, and that just before the funeral the sides of the grave had fallen in, and that he had evidently misjudged the extent and depth.

10. *Slaughter Houses.* As one of the results of my "house-to-house inspections" in various parts of the District, I would again point out, as I did in my Report of 1893, that it is desirable the Authority should be vested with power under sec. 169 of the Public Health Act, 1875, to make Bye-laws for the regulation of Slaughter-Houses in all the Parishes of the Authority's District, as indeed was done in Woking before it was severed from this District and constituted an Urban Authority.

The Sanitary Inspector's Report and an Appendix with certain Statistical Tables will be found at the end of this Report.

In conclusion the Authority and myself are much indebted to my predecessor Dr. Jacob for his valuable statistics during the many years he was Medical Officer of Health to the Authority.

I am also very grateful to the Authority's Surveyor, Mr. James Dewhirst for valuable assistance; and I have to again thank Admiral J. P. Maclear for his interesting contribution on Meteorology (Sect. III.)

I have the honour to be,
Gentlemen,

Your obedient Servant,

W. WELLINGTON LAKE.

Topcroft, Guildford,
February 28th, 1895.

IX. Sanitary Inspector's Report for the Year ending December 31st, 1894.

Number of complaints received in writing	16
Number of nuisances reported and abated	207
Number of nuisances reported and not yet abated.....	6

*Particulars of work done by owners and occupiers for the abatement
of Nuisances, &c., in compliance with Notice.*

Number of privies, drains, cesspools, and ditches cleansed out, and accumulations or deposits removed	94
Number of new privies, pail closets, W.C.s, or ashpits provided.....	11
Number of old privies re-constructed as pail closets, E.C.s, or otherwise repaired	15
Number of premises in which the drains were trapped or otherwise improved, or disconnected from the house drains.....	63
Number of premises in which new drains or cesspools were provided.....	25
Number of houses in which overcrowding was abated	2
Number of houses which were cleansed, repaired, or provided with efficient ventilation (after notice under the Public Health Act, 1875, or under the Housing of the Working Classes Act, 1890.....	64
Number of premises from which animals, improperly kept, were removed.....	3
Number of legal proceedings taken	1

Water Supply :—

Number of samples of potable water sent to the Medical Officer of Health and the Public Analyst for analysis.....	27
Number of houses to which water was supplied by owners after notice (under sections 62 and 70 of the Public Health Act, 1875, or section 3 of the Public Health (Water) Act, 1878)	23
No legal proceedings were necessary.	

JAMES DEWHIRST, Assoc. San. Inst.,
Sanitary Inspector.

X.-APPENDIX.

A.—TABLE OF DEATHS during the Year 1894, in the Guildford Rural Sanitary District, classified according to Diseases, Ages, and Localities; and shewing also the Population of such Localities, and the **BIRTHS** therein during the Year.

Names of Localities adopted for the purpose of these Statistics, Public Institutions being shewn as separate Localities.	* Population at all Ages.		Registered Births.	Mortality from all causes at subjoined Ages.								Mortality from subjoined causes, distinguishing Deaths of Children under Five Years of Age.													Injuries,	Other	TOTAL.									
	At Census 1891.	Estimated to middle of 1894.		At all ages.	Under 1 year.	1 and under 5	5 and under 15	15 and under 25	25 and under 60	60 and upwards.	Age.	Smallpox.	Measles.	Scarlatina.	Diphtheria.	Membranous	Whooping	Typhus.	CONTINUED FEVERS.			Influenza	Diarrhoea and	Dysentery.	Rheumatic	Fever.	Erysipelas.	Puerperal	Phthisis.	Bronchitis,	Pneumonia,	Heart				
																		Group.	Cough.	Other or Doubtful.																
RIPLEY Sub-District	2837	2970	74	18	3	1	..	2	3	9	Under 5 5 upwds	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	4	14
ALBURY Sub-District	5133	5330	111	58	9	2	1	2	19	25	Under 5 5 upwds	..	..	..	..	1	..	..	..	..	..	..	..	..	..	..	..	..	5	47
GODALMING Sub-District.....	8976	3850	64	31	3	2	..	1	14	11	Under 5 5 upwds	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	5	26
WOKING Sub-District (Pirbright and Worplesdon) ..	10715	2800	64	34	8	..	1	1	10	14	Under 5 5 upwds	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	6	26
GUILDFORD Sub-District	5205	5610	157	45	10	9	3	3	13	7	Under 5 5 upwds	..	1	..	1	2	1	1	19	26					
ISOLATION HOSPITAL	13	..	7	6	Under 5 5 upwds	7	6	7	6					
Totals	32866	20560	470	199	33	21	11	9	59	66	Under 5 5 upwds	..	1	..	8	9	1	..	..	1	..	2	2	..	..	..	..	..	27	145

The subjoined numbers have to be **DEDUCTED** from the above, in judging of the Mortality of this District.

Deaths occurring in the District among persons not belonging thereto	7	..	3	4	Under 5 5 upwds	3	3	4
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The subjoined numbers have to be **ADDED** to the above, in judging of the Mortality of this District.

Deaths occurring in the Workhouse and County Hospital among persons belonging to the District	26	..	1	4	2	7	12	Under 5 5 upwds	1	25
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NOTE.—*The following Deaths in the Workhouse, in the Isolation Hospital, and in the Royal Surrey County Hospital, must be *added* to those with which each Sub-District has been debited in the Table, viz.—
Ripley Sub-District, 4; Albury Sub-District, 7; Godalming Sub-District, 2; Woking Sub-District (Worplesdon and Pirbright), 10; Guildford Sub-District, 9.

Table B.—Shewing the number of houses invaded, and of persons attacked, by the undermentioned Zymotic Diseases, in each Parish of the District, during the year 1894.

